

OIL ANALYSIS REPORT

Sample Rating Trend





CATERPILLAR 980K LDR015

Rear Left Planetary

PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

	GAL)			Dec2023		
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0879727		
Sample Date		Client Info		01 Dec 2023		
Machine Age	hrs	Client Info		15581		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>500	75		
Chromium	ppm	ASTM D5185(m)	>10	<1		
Nickel	ppm	ASTM D5185(m)	>10	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>25	3		
Lead	ppm	ASTM D5185(m)	>25	2		
Copper	ppm	ASTM D5185(m)	>75	13		
Tin	ppm	ASTM D5185(m)	>10	0		
Antimony	ppm	ASTM D5185(m)	>5	0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	4		
Barium	ppm	ASTM D5185(m)	0	<1		
Molybdenum	ppm	ASTM D5185(m)	0	<1		
Manganese	ppm	ASTM D5185(m)	9	<1		
Magnesium	ppm	ASTM D5185(m)	1	18		
Calcium	ppm	ASTM D5185(m)	3131	2977		
Phosphorus	ppm	ASTM D5185(m)	1194	1025		
Zinc	ppm	ASTM D5185(m)	1281	1256		
Sulfur	ppm	ASTM D5185(m)	3811	9165		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS	\$	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>75	15		
Sodium	ppm	ASTM D5185(m)		4		
Potassium	ppm	ASTM D5185(m)	>20	<1		
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DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

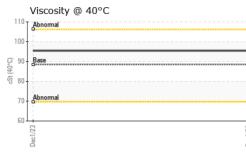
Fluid Condition

The condition of the oil is acceptable for the time in service.



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VISUAL



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
	scalar	Visual*	NONE	NONE		
				-		
				-		
			>0.2			
Free water	scalar	visuai		NEG		
FLUID PROPER	TIES	method				history2
Visc @ 40°C	cSt	ASTM D7279(m)	88.5	95.4		
SAMPLE IMAGE	9	method	limit/base	current	history1	history2
	.0	method	iiiiii/base	current	Thistory I	THSTOLYZ
Color					no image	no image
Bottom					no image	no image
GRAPHS						
Iron (ppm)				Lead (ppm)		
2000			150) T		
			E ¹⁰⁰) - G		
Abnormal			° 50	Abnormal		
Dec1//			Dec1//	Dec1/		
			_)	-
			30		om)	
Severe						
50- Abnormal				Abnormal		
0			(
c1/23			c1/23	c1/23		
Dec			Dec	Der		
Copper (ppm)				Silicon (ppm)		
200] [le		
100 - Abnormal			E 200			
Autolilla						
			^읍 100	Abnormal		
0			(J		
			00 bec1/23	Abnormal Bec1/23		
Dec1/23			(Dec1/23		
Viscosity @ 40°C			(Additives		
Viscosity @ 40°C			Dec1/52	Additives	L	
Viscosity @ 40°C			Dec1/23	Additives]	
Viscosity @ 40°C			400(2000 1000	Additives]	2
Viscosity @ 40°C			400(2000 1000	Additives]	
Viscosity @ 40°C			EZ 4000	Additives]	
Viscosity @ 40°C	Received Diagnos Diagnos	d : 06 ed : 06 tician : We	4000 5200 100 1000 1	Additives Additives calcium phosphorus zinc 7L 5H9 1350 Gove	ernment Rd. W, MA	Eagle Canad CASSA COMPLE Iand Lake, O CA P2N 3J ch Lamontagn
	Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 40°C SAMPLE IMAGE Color Bottom GRAPHS Iron (ppm) Severe Abnormal Copper (ppm) Copper (ppm)	Yellow Metal scalar Precipitate scalar Silt scalar Debris scalar Sand/Dirt scalar Sand/Dirt scalar Appearance scalar Odor scalar Codor scalar Free Water scalar Free Water scalar FLUID PROPERTIES Visc @ 40°C Color cSt SAMPLE IMAGES Color GRAPHS Iron (ppm) Severe Anormal Aluminum (ppm) Severe Anormal Copper (ppm)	Yellow Metal scalar Visual* Precipitate scalar Visual* Silt scalar Visual* Debris scalar Visual* Sand/Dirt scalar Visual* Appearance scalar Visual* Odor scalar Visual* Odor scalar Visual* Emulsified Water scalar Visual* Free Water scalar Visual* Free Water scalar Visual* Ftuild PROPERTIES method Visc @ 40°C cSt ASTM D7279(m) SAMPLE IMAGES method Color Sammal	Yellow Metal scalar Visual* NONE Precipitate scalar Visual* NONE Silt scalar Visual* NONE Debris scalar Visual* NONE Sand/Dirt scalar Visual* NONE Appearance scalar Visual* NORML Odor scalar Visual* NORML Odor scalar Visual* NORML Odor scalar Visual* NORML Emulsified Water scalar Visual* NORML FLUID PROPERTIES method limit/base Visc @ 40°C cSt ASTM D7279(m) 88.5 SAMPLE IMAGES method limit/base Color	Yellow Metal scalar Visual* NONE NONE Precipitate scalar Visual* NONE NONE Silt scalar Visual* NONE NONE Debris scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML Odor scalar Visual* NORML NORML Emulsified Water scalar Visual* >0.2 NEG FLUID PROPERTIES method imit/base current Visc @ 40°C cSt ASTM D7279(m) 88.5 95.4 SAMPLE IMAGES method imit/base current Color	Yellow Metal scalar Visual* NONE NONE Precipitate scalar Visual* NONE NONE Silt scalar Visual* NONE NONE Silt scalar Visual* NONE NONE Sand/Dirt scalar Visual* NONE NONE Appearance scalar Visual* NORML NORML Odor scalar Visual* NORML NORML Emulsified Water scalar Visual* NORML NORML Free Water scalar Visual* NORML NORML Free Water scalar Visual* NORML noimage SAMPLE IMAGES method limit/base current history1 Visc @ 40°C cSt ASTMD727(m) 88.5 95.4 Samm ga ga ga ga ga Gloor ga ga ga

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